

REMARKS

Claims 1-21 and 23-28 are pending. Claims 1-21 and 23-28 stand rejected, as discussed in further detail below. Independent claims 1, 11, and 21 have been amended. No new matter has been added. Reconsideration and allowance of the present application is respectfully requested in view of the foregoing claim amendments and the following remarks.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-21 and 23-28 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pub. No. 2004/0010499 to Ghosh, et al. (Ghosh) in view of U.S. Pat. No. 6,240,414 to Beizer, et al. (Beizer). Reconsideration is respectfully requested.

Independent claims 1, 11, and 21 have been amended to further clarify that a changed data page is being marked to indicate that a transaction log buffer has yet to be flushed to a persistent data store. Specifically, these claims have been amended to recite “***marking [a] changed data page*** in [a] memory to indicate ***on the changed data page*** that [a] transaction log buffer has yet to be flushed to [a] persistent data store; … determining whether the changed data page is marked ***indicating that the transaction log buffer has yet to be flushed to the persistent data store***; and if the changed data page is marked ***indicating that the transaction log buffer has yet to be flushed to the persistent data store***, flushing the transaction log buffer to the persistent data store prior to the changed data page being read.” Thus, as amended, independent claims 1, 11, and 21 are directed to a method, computer-readable medium, and system, respectively, in which data consistency is ensured in a system that allows “lazy commits,” by flushing a transaction log buffer of a marked data page to persistent storage before reading from the marked data page. Neither Ghosh nor Beizer teaches or suggests this capability.

Ghosh discloses marking a ***log buffer*** to indicate that the buffer is ready to be written to a log disk (Ghosh at Paragraph [0076]). Nowhere, however, does Ghosh teach or suggest marking a ***changed data page***, as recited in the independent claims. In fact, the Office Action recognizes, and the applicants agree, that Ghosh does not teach the marking of a changed data page (*see* Office Action at Page 4). The Office Action, however, looks to Beizer to cure this deficiency. In particular, the Office Action alleges that Beizer at column

7, lines 40-65 teaches or suggests the marking of a changed data page (*see* Office Action at Page 4). However, that is not the case.

Beizer does not teach or suggest marking a changed data page. More specifically, Beizer does not teach or suggest “***marking [a] changed data page*** in [a] memory to indicate on the changed data page ***that [a] transaction log buffer has yet to be flushed to [a] persistent data store,***” as recited in independent claims 1, 11, and 21. In Beizer, multiple users are authorized access to the same data file and are permitted to make changes to the data file (*see* Bezier at col. 2, lines 64-67). The changes made by each user are embedded in a history log (Beizer at col. 10, line 58 – col. 11, line 3). If the changes made by two users are inconsistent, as recorded in the history log, then a user will be notified of the inconsistent changes so that the inconsistencies can be properly resolved (Beizer at col. 6, line 62 - col. 7, line 22). The notification of the inconsistencies in the data file in Beizer, however, is not indicated ***on the data file*** and is unrelated to the use of ***persistent storage***. Thus, while Beizer discloses a notification of inconsistent changes made to a data file, nowhere does Beizer teach or suggest “***marking [a] changed data page*** in [a] memory to indicate on the changed data page ***that [a] transaction log buffer has yet to be flushed to [a] persistent data store,***” as recited in independent claims 1, 11, and 21.

Because neither Ghosh nor Beizer teaches or suggests “marking [a] changed data page in [a] memory to indicate on the changed data page that [a] transaction log buffer has yet to be flushed to [a] persistent data store,” no combination of Ghosh or Beizer will produce the claimed method, computer-readable medium and system. For at least the foregoing reasons, the applicants submit that independent claims 1, 11, and 21 are allowable over Ghosh and Beizer, either alone or in combination. Inasmuch as the remaining claims depend from one of the independent claims 1, 11, and 21, they too are believed to be allowable for at least the same reasons. Reconsideration of the Section 103(a) rejection is respectfully requested.

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PATENT

CONCLUSION

For all the foregoing reasons, the applicants respectfully submit that the present application is now in condition for allowance.

Respectfully submitted,

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/Steven B. Samuels/
Steven B. Samuels
Registration No. 37711

Woodcock Washburn LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439